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SCENTED NOVELTY PRODUCTCROSS-REFERENCE TO RELATED APPLICATIONS

This application is based on and claims priority from U.S. Provisional Patent Applications 60/265,813 and 60/266,249 filed respectively on February 1 and
5 February 2, 2001, the disclosures of which are incorporated by reference herein.

BACKGROUND OF THE INVENTIONField of the Invention

The invention is related to scented wearable novelty articles, such as scented tattoos and scented bracelets. It is related more particularly to a scented product
10 comprising a microencapsulated scent applied to a sheet material.

Related Art

Claff, U.S. Patent 3,441,353, and Fellows et al., U.S. Patent 4,925,667, disclose perfume dispensing arrangements wherein an encapsulated fragrance may be applied to a tape material such as paper, cloth, or plastic for being dispensed.
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Ornitz, U.S. Patent 6,051,547, discloses plastic jewelry comprising a combination of silicone and scented oils.

Guillet, U.S. Patent 5,233,371, discloses wearable objects such as eyeglasses containing a plate which is impregnated with a perfume.

Lo et al., U.S. Patent 4,876,039, discloses a method of making microcapsules.
20 Example 8 discloses microcapsules containing a fragrance.

Yamamoto, U.S. Patent 5,387,622, and Yamamoto, U.S. Patent 4,987,161, disclose encapsulated perfumes, which may be encapsulated for example in a polymer matrix, and which are said to retain their fragrance for a long time.

Tokunaga, U.S. Patent 5,000,780, discloses a metal material which may be impregnated with a liquid perfume.

Haiduk, U.S. Patent 4,964,570, discloses a perfume dispenser.

Tajiri et al., U.S. Patent 5,120,360, discloses a microcapsule-containing ink composition for NCR paper.

Ogawa, U.S. Patent 5,998,541, Ogawa, U.S. Patent 6,063,438 and Ogawa, U.S. Patent 5,770,640 disclose microencapsulated finishing agents.

None of the foregoing references discloses or suggests a scented wearable novelty article, such as a scented tattoo or a scented bracelet, comprising a microencapsulated scent applied to a sheet material.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view showing a scented bracelet according to an embodiment of the invention.

Fig. 2 is a cross-sectional view of the bracelet.

Fig. 3 is a perspective view showing equipment used in a spraying process according to an embodiment of the invention.

Fig. 4 is a side view of a scented tattoo according to an embodiment of the invention.

Fig. 5 is a side view of a scented hair ornament according to another embodiment of the invention.

DESCRIPTION OF EMBODIMENTS OF THE INVENTION

By a combination of a structure and a manufacturing process, the invention provides both an economical manufacturing process and improved adhesion of the scented material to the bracelet, tattoo or other wearable object.

According to a broad aspect of the invention, a liquid containing a microencapsulated fragrance may be applied, for example by silk-screening or

spraying, onto tattoo material, a sheet material or fabric material, an article of jewelry, or onto another article.

In an embodiment of the invention, the article to be manufactured may be a so called "slap bracelet," namely a bracelet 10 which can be placed on the wrist by a rapid slapping movement, as shown in Fig. 1. The bracelet 10 comprises a body 20 made of metal or another elastic material. The elastic material body 20 is covered by, for example, a fabric body 30, as shown in cross-section in Fig. 2. Both woven and non-woven fabrics and any other suitable sheet material are usable. The fabric body 30 may be glued or adhered to the elastic body 20 in any suitable way; and further may be simply wrapped or otherwise disposed on the elastic body without adhesion. The fabric is impregnated before or after attachment to the elastic material by spraying it with a liquid slurry or another fluid containing microcapsules (shown schematically at 60 and 70 in Fig. 1) which in turn contain a fragrance.

The invention has been successfully practiced with bracelets covered with real or simulated suede-type and feather-type fabrics.

Depending on the particular type of fragrance used, approximately 0.5 to 3.0 grams of slurry may be applied to each bracelet. More or less fragrance may be used if needed, for particularly strong or weak fragrances. The microcapsules are approximately 20-30 microns in diameter and may be produced by any suitable method. The fragrance content of the slurry may be approximately 15-60 percent, preferably about 20 percent; for example, 5 gal. of slurry may contain 1 gal. of fragrance.

The slurry may further contain an appropriate water soluble binder to promote adhesion to the substrate. Typical binders include polyvinyl alcohol, polyvinylidone, cellulose acetate phthalate, carboxy methyl cellulose, acacia gum and other suitable materials. The content of binder in the slurry can be from about 2 to 30 % of the amount of encapsulated fragrance, but is preferred at about 7 to 10 percent of the encapsulated fragrance.

Other ingredients that may be contained in the fragrance slurry include thickening agents, such as fumed silica, polyethylene glycol, and / or rheology agents such as polymethacrylic acid esters. These ingredients can be used at levels of about 0.1 to 10 percent of the water present in the formulation. A typical formulation is presented below:

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Encapsulated Fragrance	20.0 grams
Acacia Gum	5.0 grams
Polymethyl Methacrylate	1.0 gram
Water	<u>74.0 grams</u>
	100.0 grams

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In use, when the microcapsules are touched, they break, thereby releasing the fragrance. Thus, intact microcapsules remain sealed, retaining the fragrance.

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Although not necessary, it is advantageous in some instances to apply the fragrance primarily or exclusively to the inside of the bracelet, in the position shown at 70 in Fig. 1, and not substantially to the outside of the bracelet shown at 60. This arrangement avoids any possible discoloration of the outside of the bracelet due to the applied fragrance. Further, in this arrangement the fragrance is activated primarily by the inside of the bracelet being slapped onto the wrist, and not primarily by routine handling or contact with the outside of the bracelet.

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On the other hand, to avoid allergic sensitivities and the like, it may also be advantageous in some instances to apply the fragrance primarily or exclusively to the outside of the bracelet, in the position shown at 60 in Fig. 1.

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Fig. 3 shows equipment usable for producing the bracelet 10. In this example, suitable for small quantities, the equipment may be a spray can 40 with a downward-directed hood-shaped outlet 50. Other conventional types of spraying equipment may be used as well.

After the fabric body 30 is placed on the elastic body 20, the assembled bracelet is placed under the outlet 50 and sprayed with the fragrance-containing

liquid. Enough material is applied to the bracelet to provide a commercially acceptable fragrance in the final product, but not so much that the material builds up and develops a crusty appearance. After scenting, the bracelet is either air dried or passed through a heater to accelerate the drying process. The parameters of the process can easily be adapted by those skilled in the art according to the commercial product that is desired to be manufactured.

According to another aspect of the invention, the same or a similar liquid or fluid can be silk-screened or sprayed onto a tattoo material or onto a backing paper to make a scented tattoo.

Fig. 4 is a schematic cross-sectional view showing a scented tattoo according to an embodiment of the invention. In this example, a tattoo sheet 101 has a conventional dye 103 applied to it in an appropriate pattern to be applied to the skin of the wearer. A layer of scented material 105 as described above overlies the dye 103. The foregoing layers are protected prior to use by a backing sheet 107. The layers in Fig. 4 are shown schematically and are not drawn to scale. The layers can be placed in a different order if desired.

The invention is also applicable to an arrangement as described in U.S. Patents 6,116,251 and Des. 430,350, incorporated by reference. These patents disclose an arrangement of two elastic bodies which are covered by respective fabric bodies and connected together by an attachment member. See especially Figs. 1-9 and 12A-14B and the corresponding text. One or both of the fabric bodies may have scented material applied to one or both sides in accordance with the present invention.

In a further embodiment of the invention, shown in Fig. 5, a second fabric body 32 may be attached so as to provide additional decoration to the bracelet 10. The second fabric body 32 may optionally have an elastic body therein, which may be of the same type as the elastic body 20, which automatically curls into a spiral shape, or may be selected to stretch and contract longitudinally.

The embodiment of Fig. 5, as well as the other embodiments described above, are not limited to being used as a bracelet or the like, but may be usable as hair ornaments, for example, as disclosed in Figs. 19A and 19B of U.S. Patent 6,116,251 and the corresponding text.

Although the present invention has been described in relation to particular embodiments thereof, many other variations and modifications and other uses will become apparent to those skilled in the art. Accordingly, the present invention is not limited by the specific disclosure herein.

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